

CONTENTS

CONTENTS

| CHAPTER | TITLE | PAGE |
|---------|--|--------|
| I | INTRODUCTION | ... 1 |
| II | MATERIAL AND METHODS | ... 6 |
| | i) Study Area | ... 7 |
| | ii) Collection of Samples | ... 10 |
| | iii) Methods of Analysis | ... 11 |
| | a. Water analysis | ... 11 |
| | b. Soil analysis | ... 11 |
| | c. Plant analysis | ... 12 |
| | d. Primary productivity | ... 12 |
| III | RESULTS AND DISCUSSION | ... 13 |
| | i) Temperature | ... 14 |
| | ii) pH | ... 16 |
| | iii) Electrical Conductivity | ... 18 |
| | iv) Chlorides and Salinity | ... 20 |
| | v) Heavy metals and Zinc | ... 23 |
| | a. Cadmium | ... 23 |
| | b. Lead | ... 26 |
| | c. Mercury | ... 27 |
| | d. Zinc | ... 28 |
| | vi) Effect of heavy metals and Zinc on mangroves | ... 29 |
| | a. Moisture percentage | ... 40 |
| | b. Electrical conductivity | ... 42 |
| | c. Titratable acid number | ... 42 |
| | d. Proline | ... 45 |
| | e. Polyphenols | ... 45 |
| | f. Chlorophylls | ... 47 |
| | | |

CONTENTS (contd.)

| CHAPTER | TITLE | PAGE |
|---------|---|--------|
| vii) | Primary productivity and Effect of heavy metals and zinc | ... 52 |
| IV | SUMMARY AND CONCLUSIONS | ... 61 |
| | REFERENCES | ... 70 |
| | STATEMENT - I | ... 82 |
| | STATEMENT - II | ... 83 |